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ORIGINAL ARTICLES.

The Radical Cure of Inguinal Hernia.

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Major and Surgeon U. S. Army.

Read at the Thirty-first Annual meeting of the Kansas Medical Society, Topeka, May 12-14, 1897.

In presenting to the Kansas Medical Society a contribution with the above title, I am actuated by a desire to bring before the medical profession of the State, and, if possible, to impress upon the individual members of this society, the immense strides which have been made of late in the cure of inguinal hernia by operative methods. The radical cure of hernia by present methods is one of the most brilliant triumphs of modern surgery, and would of itself be sufficient to shed a halo of glory around the declining years of the nineteenth century, a period fraught with so many wonderful advances in our grand profession.

When we consider the prevalence of hernia, and its disqualifying effects, not to mention the danger to life from strangulation, it is not going too far to consider the establishment of a radical cure for this distressing condition one of the greatest boons ever conferred upon suffering humanity by the masters of the healing art. Marcy says those surgeons of most experience in the treatment of ruptures estimate that from one-sixteenth to one-eighth of the human race is affected with this complaint, and that the United States census for 1880 shows, under the head of vital statistics, that out of 756,893 deaths one in every 600 was from

hernia. The "Medical and Surgical History of the War of the Rebellion" states that among the white troops of the Union armies, 24,353 cases of rupture occurred during the five and one-sixth years of the war.

It is not my purpose to trace the history of the attempts to cure hernia by operative means from the days of Celsus, who flourished in Rome during the time of the Emperors Augustus and Tiberius, and who was the first surgeon to operate upon non-strangulated hernia, down to the present time. Ancient history is not my theme, and I shall aim to make my present paper eminently practical and strictly modern. It seems strange at first thought that for so many centuries the master minds in our profession should have striven in vain for the solution of the problem of securing a radical cure for hernia by operation, and that until very recent years the use of the truss should have been considered the most advisable and useful method of treatment. Upon slight reflection, however, the reason becomes perfectly plain—the whole secret is this: Modern aseptic methods, with the use of the buried suture, together with the inventive surgical genius of Macewen, Championniere, Kocher, Marcy, Bassini, and Halsted, have solved the problem. Now, in the great majority of cases, we *can* and *do* cure inguinal hernia, that opprobrium of the operating surgeon for so many centuries, and that too with such a slight rate of mortality that the latter unfortunate result need not be considered a factor in the case. Assuming the aseptic technique to be perfect that an operation for the radical cure of oblique inguinal hernia may be successful, three general indications must be met:

1. The hernial sac must be obliterated.
2. The internal abdominal ring must be narrowed so as to closely embrace the sepa-

rate cord, or a new internal ring must be made.

3. The inguinal canal must be reconstructed, and its obliquity re-established.

The successful methods of operation all carry out these three indications.

That the hernial sac must be obliterated goes without saying, for if left intact its open mouth at the internal abdominal ring simply offers a "trap for intestine," which with every compression of the contents of the abdominal cavity will be forced into the opening, with the result that after a longer or shorter time the knuckle of bowel will work its way down by the side of the cord, and the hernia recur. It is equally clear that the other two indications must be met when we bear in mind in the first place that an oblique inguinal hernia invariably recurs by the intestine working its way through the internal ring, and down the canal by the side of the cord which must be prevented by securing the tissues at the position of the internal ring closely around the cord, and in the second place that the internal ring in a well established case of oblique inguinal hernia is in the great majority of cases much enlarged, and more clearly behind the external ring than is normally the case, hence rendering it necessary to re-establish the obliquity of the inguinal canal, which is so beautifully provided for in Bassini's and Halsted's operations.

Before the days of antiseptic and aseptic surgery it was almost impossible to meet these indications, for infections of the wound with pyogenic organisms constantly occurred, and as a consequence no closure of the internal abdominal ring closely around the cord was permanent, and no renovation of the inguinal canal possible, not to mention the constant danger of death from sepsis. It is now a cardinal point in prognosis that should the deeper portion of the wound become infected, and the deep sutures slough out in consequence, relapse may be confidently looked for. A thorough system of aseptic technique is therefore essential, and we cannot be too careful in this regard, remembering that hernial wounds are very prone to become infected, both owing to

their site, and to the fact that in closing the internal abdominal ring around the cord, and in reconstructing the inguinal canal, the tissues involved are necessarily subjected to an unusual degree of tension which renders them less able to combat successfully the invasion of micro-organisms, if any should by accident find access to the wound.

Furthermore, we are dealing with peritoneum in treating the hernial sac and its contents, and carelessness in the matter of asepsis, or more properly speaking *lack of asepsis*, may lead to a very radical cure of the hernia by the death of the patient from septic peritonitis. Not deeming it necessary, in such an assemblage as the present one to describe the anatomy of the inguinal region, I shall proceed without further preface to the discussion of the actual operative treatment of the condition in question.

I am firmly convinced that the ideal methods for the radical cure of hernia are the operations of Bassini and Halsted, and that when the operator comes to select his method for any special case his choice may safely be limited to these two. I do not think that any other method should be considered for a moment. Having always performed the Bassini operation, which is my preference, I shall first describe briefly the steps of this method, and then refer to the points in which Halsted's operation differs from it. As before mentioned the aseptic technique must be thorough in the extreme, and for this reason the operation should always be performed in a properly appointed operating room. The patient is prepared as for any other operation involving the abdominal cavity, and when ready for the operation to begin is covered with freshly sterilized towels, the groin involved alone being exposed. It is needless in this assemblage of expert surgeons to describe the dress of the operator and assistants, and the treatment of hands and fore-arms, or any other features of the aseptic technique. In any operations all of these details receive the most careful attention. Everything being in readiness the incision in the skin is made extending from the spine of the pubes upward and outward, in a general way par-

allel with Poupart's ligament, for about three or three and one-half inches. All bleeding vessels are clamped as divided. Several large veins are generally seen in the superficial fascia crossing the line of incision which should be each divided between two hæmostatic forceps. Having clearly exposed the aponeurosis of the external oblique muscle, the external abdominal ring is recognized, and clearing away the fascia covering it the operator passes a grooved director up the canal, and divides the external oblique aponeurosis upon it, thus laying open the canal. On drawing the flaps of the aponeurosis just mentioned to either side, the arching fibres of the internal oblique muscle are at once brought into view. These fibres arising from the outer part of Poupart's ligament arch inward in front of the outer extremity of the canal, and joining with the lowermost fibres of the transversalis muscle form the conjoined tendon, which passes down along the inner side of the canal to its insertion into the crest of the pubes and pectineal line. This conjoined tendon plays a most important part in the Bassini operation. Having recognized the conjoined tendon and the arching fibres of the internal oblique, we find a funnel shaped process of fascia coming from under the arch, and narrowing somewhat as it descends. This is the infundibuliform process of the transversalis fascia which being prolonged from the margins of the internal abdominal ring, contains the spermatic cord, and in the oblique variety of rupture the sac of the hernia as well, and invests the cord and testis below in a definite sheath. Now grasp this tissue with toothed forceps close up to the arching fibres of the internal oblique, that is as near the internal ring as possible, and with the handle of the scalpel, or the blunt dissector, tear through this fascia by rapid strokes until the white sac is exposed. Try to get down to the sac proper, so as to more easily separate the latter from adventitious tissue. Having reached the sac divide the transversalis fascia from the small opening made for some distance down towards the pubes. The sac will generally be seen to be flaccid and empty.

Grasping it with forceps, or between the thumb and forefinger of the left hand, it is carefully dissected out, special care being exercised in separating it from the cord, which in the oblique variety of hernia will be found behind the sac. Having separated the latter from all adhesions in the canal and the cord, pass the index finger around the neck of the sac within the margins of the internal ring, to make sure of its being free in this situation. The sac is then opened between two pairs of forceps, which grasp it near its base, and which hold it in a position perpendicular to the body of the patient, and the index finger is passed in, and the interior explored. Next slit the sac down toward the neck with scissors, and while using gentle traction ligate it close to the internal ring with aseptic silk or kangaroo tendon, preferably the latter. Cut off the portion of the sac beyond the ligature, and allow the peritoneum to retract into the abdominal cavity. If the sac is large it is best to ligate it with a series of mattress sutures. If it contains omentum this should be ligated into sections, the portions beyond the ligatures excised, and the stump returned into the abdominal cavity. Of course, if there is bowel in the sac, the former must be carefully separated from adhesions, if any exist, and be returned into the abdomen. Having disposed of the sac, separate the spermatic cord from any loose tissue binding it down to the floor of the canal, pass a blunt hook under it, and draw it into the outer and upper portion of the internal ring from its former situation at the lower margin of the ring. Then while the cord is held in this position by an assistant, and while the flaps of the divided aponeurosis of the external oblique are strongly retracted towards their respective sides, grasp the conjoined tendon, and with the fingers or blunt dissector break its loose connections with the external oblique muscle in front, and with the transversalis fascia behind, so that it can be drawn to meet Poupart's ligament of any loose tissue covering it. Now, strongly retract the outer flap of the external oblique aponeurosis, so as to throw the ligament mentioned into bold re-

lief, and drawing the conjoined tendon to meet the latter, stitch these structures together closely around the dislocated cord, continue the line of union down to a point as near the pubes as possible.

I invariably use kangaroo tendon for these deep sutures, as well as for all the buried sutures. Then lay the cord upon the new floor of the canal formed by the union of the conjoined tendon to Poupart's ligament in the manner above described. The wound in the external oblique aponeurosis is next closed with kangaroo tendon, the lowest suture closely embracing the cord at its exit from the canal, thus completing the external abdominal ring. We have now repaired the roof of the canal, and it only remains for us to unite the skin wound with interrupted sutures of silk-worm gut, and the operation is ended.

I make no provision for drainage, and use no chemical in the wound, following the dry aseptic method. The wound is dressed with dry aseptic gauze and freshly sterilized absorbent cotton, and this dressing is left on for one week. The patient remains in bed for three weeks. I have recently modified the method of performing the Bassini operation, somewhat, as advised by Dr. McAndrews, of Chicago, and others, by uniting the transversalis fascia by a separate row of buried sutures beneath the plane of union of the conjoined tendon to Poupart's ligament. This is in my opinion a decided improvement on the usual method. If it is discovered when treating the sac that it is of the congenital variety, it will be necessary to divide it into two portions; the upper portion being treated as usual, while the lower at its upper divided end is stitched around the cord to form a tunica vaginalis.

In the case of a direct hernia, the sac is internal to the cord, and does not come through the internal ring. In operating for this variety of hernia, the canal must be opened as described, the transversalis fascia covering the sac must be incised, and the sac exposed and dissected out. It should be ligated with kangaroo tendon mattress sutures, and excised. The wound in the transversalis fascia should be united by a buried

row of kangaroo tendon sutures, and the remaining steps of the operation performed exactly as described for the oblique variety.

In the case of the female, the operation by Bassini's method is performed as already described, except that the round ligament is not dislocated, as is the spermatic cord in the male, the conjoined tendon being united to Poupart's ligament *over* the round *ligament*. In these operations the hæmostatic forceps are left in place until they are reached in closing the wound, when if necessary the vessels in their grasp may be ligated. I have performed several operations in succession without finding it necessary to ligate a single blood-vessel.

As mentioned above, I invariably use kangaroo tendon for all buried sutures, and I would most earnestly advise anyone intending to perform this operation to use this material at least for the sutures uniting the conjoined tendon to Poupart's ligament. The great advantage of kangaroo tendon is the fact that it will remain unabsorbed for from two to three months without causing the least irritation, thus giving the fibrous tissues involved ample time to unite firmly. It is with ease rendered aseptic. The above mentioned properties show its great superiority to cat-gut. I always sterilize the tendon to be used in each operation no matter from what source it may have been received. The method which I have pursued to secure sterilization of this material it may be well to mention in this connection, as I do not think that directions of this character can be found in any text-book. The tendon is soaked for forty-eight hours in ether to deoleate, the ether being changed at the end of the first twenty-four hours, and then treated for the same length of time in ethereal solution of bichlorid of mercury, 1-1000, fresh solution being used at the end of twenty-four hours as before. This gives it a stay of forty-eight hours in pure ether, and a similar sojourn in ethereal solution of bichloride of mercury. The tendon is then placed in absolute alcohol containing five per cent. of carbolic acid, in which it is left until the operation when it is removed, and placed in a sterilized glass

vessel containing 95 per cent. alcohol. It should be placed in any watery antiseptic solution. A reliable assortment of tendon so treated will be found absolutely aseptic. Marcy's tendon should invariably be used. Of late I have been getting the dried tendon directly from Dr. Marcy, to whom belongs the honor of its introduction, and sterilizing it as above described. I have used it in twelve Bassini operations with perfect success in every case, not one suture having yielded, or given the slightest trouble.

Since January 7, 1896, I have, as just stated, performed twelve operations for the radical cure of hernia in adult males, after the method described in the preceding pages. Every wound has healed virtually *per primam*; there has not been a single stitch abscess, nor the slightest pyogenic infection in any instance, and every case has remained cured of hernia to the present time. I have traced these twelve cases with one exception, this being the case of a soldier who was discharged by reason of expiration of term of service. I feel sure that if this man had experienced a relapse I would have heard from him through his friends at Ft. Leavenworth.

Halsted's Method: In this operation, after making the skin incision as in Bassini's method, the external oblique aponeurosis is divided from the external abdominal ring to a point about one inch or less above the internal abdominal ring. Then the internal oblique and transversalis muscles, and the transversalis fascia are divided, in the order mentioned, from the internal ring upwards and outwards to a point corresponding with the termination of the incision in the external oblique. This last incision completes the division of the layers of the abdominal wall down to the peritoneum. The sac is then isolated as in the Bassini operation, and ligated with a series of silk mattress sutures close to the abdominal cavity, the portion beyond the ligatures being cut off. The cord is then reduced to about one-third of its former size by the ligation en masse, and excision of the superfluous veins. A mattress suture of silver wire is then passed at the upper angle of the in-

cision through the abdominal wall, and the reduced cord is drawn up into the incision close to this suture. A second similar mattress suture is then passed just below the cord. These sutures pass through identical tissues on each side of the wound, namely external oblique, internal oblique, and transversalis muscles and transversalis fascia. When fastened the cord is found snugly anchored between them, its point of exit marking the site of the new internal abdominal ring. A series of mattress sutures of the same material is then continued on down to as near the pubes as possible. These sutures pass from without inwards on the inner side through the external oblique, internal oblique, and transversalis muscles and transversalis fascia, and on the outer side from within outwards through the transversalis fascia, Poupart's ligament, and the aponeurosis of the external oblique muscle. When tightened and twisted these six or eight mattress sutures close the old internal abdominal ring and inguinal canal, and the cord is found making its exit through a new internal ring above, and external to the old ring. The silver wire sutures are cut short, and the ends turned down so their axes will be parallel to the planes of the tissues. These sutures are left permanently in the abdominal wall. When the cord is laid down in its new position, it will be found above the aponeurosis of the external oblique, instead of below it as before. The skin is then closed over the cord by a running buried silver suture wire. Silver wire is invariably used by Dr. Halsted in his operations at the Johns Hopkins Hospital, where I had the good fortune to observe his method. Personally, I feel a little hesitation in leaving silver wire imbedded in the tissues, and it seems to me the kangaroo tendons instead of silver wire would be the ideal material for Halsted's mattress sutures. I have never performed this operation, but if I should use it instead of the Bassini method, I shall use kangaroo tendon without fail. This was done over a year ago by Major S. O. Robinson, surgeon U. S. Army, with perfect result, his case remaining cured to the present time.

Results of the modern methods—Dr. W. B. Coley, of New York, in a recent paper published, in the *Annals of Surgery* for March, 1897, gives his results with the Bassini's operation from 1891 to the present time. He has during this period performed 325 Bassini operations for inguinal hernia. Three hundred operations were after the typical Bassini method with kangaroo tendon, with two relapses and one death; Bassini's method with silk sutures, *one case with one relapse*. He also in twenty-four cases did a modification of Bassini's operation consisting in leaving the cord in its normal position, and suturing the conjoined tendon to Poupart's ligament over it after treating the sac as usual. In the twenty-four cases three relapses occurred, which evidently shows that this modification is no improvement on the typical Bassini method. The only death that occurred in Dr. Coley's series of operations was from double pneumonia, and should not properly be charged against the Bassini method.

In 1890 Bassini published a series of 251 cases of his operations upon reducible inguinal hernia. He was able to trace all but four of these cases. In seven cases there was relapse. One case died from pneumonia which commenced after complete healing of the wound.*

Coley's 300 cases in which kangaroo tendon was used with two relapses, compared quite favorably with Bassini's 251 cases, with seven relapses, and show the great value of the tendon suture. The one death in each series was from pneumonia. I should mention that Dr. Coley has been able to fully trace 280 of the 300 cases mentioned above.

Since the fall of 1895, the surgeons of the United States Army have performed 66 operations for the radical cure of hernia, viz: Two Halsted operations, one McBurney operation, and 63 after the Bassini method, with *no mortality* and *three relapses*, all of the latter being in the practice of one surgeon. In one of the relapses *silk* was used for the *deep sutures*, and sloughed out, and

in all three cases the sac was not excised. The first of these three cases has since come under my charge, and I have operated upon the relapse. I shall bring this man before the society to-day, and think that it may be of interest to outline briefly in advance the steps of the operation, giving a terse description also of the condition of the parts involved. This soldier was operated upon by another surgeon at a distant military station on December 12, 1895. The wound became infected, suppuration resulted, and the deep sutures sloughed out. The wound was slow in healing, and a large cicatrix finally resulted. Relapse occurred in this case in April, 1896, and the soldier was discharged from the service for this cause. When he first came under my observation at Ft. Leavenworth, I found a large complete oblique inguinal hernia of the left side. The cicatrix in the groin marking the site of the wound resulting from the first operation was about $3\frac{1}{2}$ inches long by $1\frac{1}{4}$ inches in width. The skin in this situation was thin, and very unhealthy looking. On February 3, 1897, I operated upon him by the Bassini method. I felt sure that I could not secure first union if I placed my skin incision in the devitalized tissue of the old scar, so determined to dissect out this entire cicatrix, which I did by surrounding it with an elliptical incision, and carefully dissecting it from the underlying external oblique aponeurosis. When the canal was opened the hernial sac was found to be very large, and united firmly to everything in its neighborhood, the work of removing it being very trying. The conjoined tendon was discovered to be still united to Poupart's ligament in the lower portion of the canal, but above this point there was a wide interval between these structures. The vas deferens was found separated from the rest of the cord, and bound down to the floor of the canal by dense adhesions. Having dissected out the vas, with much difficulty, the edges of the conjoined tendon and Poupart's ligament were freshened to remove cicatricial tissue, and were securely reunited with strong kangaroo tendon sutures, the cord being treated as usual. The divided

* See the Anatomy and Surgical Treatment of Hernia, Marcy, page 332.

external oblique aponeurosis was united in the customary manner, and the wide, oval space in the integument, remaining after the total removal of the old cicatrix, was closed by undermining the skin on each side, and sliding the flaps of skin towards each other until they met. Union in this case was primary, and I have every reason to believe that the cure will be permanent. As a result of this operation only two army cases still remain failures. To sum up the results of the Bassini method, in the 615 operations noted above there were only two deaths, both from pneumonia, and thirteen relapses. I do not include Coley's twenty-four cases in which he departed from the regular Bassini method, and in which three relapses occurred. Furthermore, the three army relapse cases in which the sac was not excised, should by rights be excluded from the list of typical operations, which deduction would leave 612 typical Bassini operations with ten relapses, a rate of only about $1\frac{1}{2}$ per cent.

Halsted's results are also brilliant. Through the kindness of Dr. J. C. Bloodgood, who is Dr. Halsted's house-surgeon at the Johns Hopkins Hospital, I have received a statement of the results of their operations for over seven years. At the Johns Hopkins Hospital 170 operations for inguinal hernia in the male have been performed by Halsted's method. One hundred and fifty cases healed *per primam*. Of these 150 cases, 121 have been traced with *no relapse found* after from seven years to two months after operation, twenty-nine cases could not be traced. In twenty cases out of the total 170 the wound suppurated. Fourteen of these cases have been traced, and six lost track of. There has been a slight relapse in one of these fourteen cases. Out of the whole series there was *one death* from acute diphtheritic colitis on the tenth day. The result in wounds which healed *per primam* are, Dr. Bloodgood says, practically perfect in every case. To sum up, Halsted's results are *one death and one relapse in 170 cases*. *Two successful Halsted's operations* have also been performed by the surgeons of the United States Army, as before mentioned.

With such a record as this before us can we doubt that a radical cure for hernia has been found? Drs. Bull and Coley have collected 5,000 cases of operation for the radical cure of hernia, in the practice of many different operators, with a mortality of 1.16 per cent.

All operators agree in the opinion that in the selection of cases for operation, the two extremes of life must be avoided. The operation should not be performed on a child under four or five years of age, or upon an adult over 50 years. Bull and Coley say that "Operation should not be advised in the very voluminous hernias of middle age. The mortality in these cases is much higher, and the prospect of a permanent cure is not sufficient to warrant the risk. Adherent and irreducible hernias are best treated by operation, provided there are no contra-indications."

Conclusions—From the facts stated in this paper I think that I am justified in formulating the following conclusions:

1. In Halsted's and Bassini's operations we have two ideal methods for the absolutely radical cure of inguinal hernia.
2. By a carefully performed operation, on the lines laid down in this paper, we can expect to secure a permanent cure in at least 95 per cent. of the cases operated upon.
3. The mortality resulting from modern methods is so slight as not to be worthy of consideration.
4. Such being the results obtained in the hands of skilled operators, it is the duty of the attending physician to advise operation in suitable cases.

DR. J. E. MINNEY leaves next week for Chicago where he expects to spend a few weeks in polyclinic work.

A NUMBER of Kansas physicians will attend the A. M. A. at Philadelphia. Drs. McClintock, Minney and Ward expect to attend from Topeka.

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Topeka, Kansas, Saturday, May 22, 1897.

It is to be hoped that the State Society will be able to publish the proceedings of the past two years during the Summer, but in order to do this it will be necessary for every member who is in arrears for dues to remit the amount due to the treasurer, Dr. L. Reynolds, of Horton. Notices of the amount due will be sent to each member, and an early response will insure the early publication of the proceedings. It is an unfortunate condition of affairs which places a society as large as the Kansas Medical Society in financial straits. We have reason to be proud of the work at the last meeting and the papers and discussions would be a great credit to us.

A COMMITTEE was appointed at the last State meeting to confer with similar committees from the Eclectic and Homeopathic

societies and arrange for a joint session at the next annual meeting. The object is to arrange some plan to secure legislation. Having the three societies meet on the same date will guarantee reduced railroad rates which we have so often failed to secure.

A POSSIBLE satisfactory health resort is being developed on the Southern coast. If climate, sea exposure, and conditions of soil indicate anything the new city on the shores Lake Sabine, known as Port Arthur, promises a satisfactory location. Many of the objections raised against other coast cities are easily met here.

Moving Backward.

The present status of medical affairs in the Western States seems one of retrogression rather than progress. The courts of Missouri have decided the action of the Board of Health in regulating medical legislation is illegal, and they are left powerless to do more than recognize a diploma from a legally chartered medical college. The Legislature of Kansas, as usual, could not be made to see the necessity of a medical law in this State, and not only refused any medical legislation but crippled the board of health by a very material reduction in the appropriation for its maintenance.

The sentiment in Illinois is very plainly manifest in the strong support given the osteopathic bill.

With this apparent retrogression it seems that some steps should be taken for a general awakening. It is possible that in some sections we have made too much progress and the present state of affairs is simply the rebound. There is one thing very evident in this State and that is that the people have become impressed with the idea that any legislation controlling the practice of medicine is an infringement of their personal rights. It is hardly worth while to attempt anything in this line until the people can be made to see the importance of it, and it is a

difficult matter to reach the class who most need instruction. The newspapers are naturally averse to any form of legislation which might in any way affect their income. This is the only explanation which can be offered for the opposition which is always met from the daily papers in Kansas when any attempt at medical legislation is made. It is well, however, for us to observe the affairs of other States, and possibly we may learn a lesson which may be of service to us should the time ever arrive when we are so fortunate as to have an effective medical law.

The Appointment of Homeopaths at the State Lunatic Asylum at Fulton.

We notice that some of the Missouri medical societies have taken occasion to censure the Governor by resolution for appointing a homeopathic physician as superintendent to the State Lunatic Asylum at Fulton, but the *Medical Review* takes the matter in hand without reserve and gives Governor Stephens the following to think over:

"The action of Governor Stephens of appointing homeopaths in charge of the State Lunatic Asylum at Fulton cannot be too strongly condemned by every intelligent person. That medical educational institutions outside of the regular scientific school should be recognized in any of the States at this phase of evolution in medical science is strange indeed, but when representatives of sectional medicine are appointed to official positions, it is time that every lover of science and therefore opponents of all kinds of dogmatism in medicine and all other sciences should enter an earnest and most emphatic protest against such ignorance and barbarism. It is strange that a person who appears to be unable to differentiate between scientific medicine and dogmatism should be the governor of a State. His action cannot be too severely criticised and reprimanded. It is expected that the State Medical Society will take a firm stand in the matter and will express an unembellished as well as unequivocal opinion."

Southeast Kansas Medical Society.

The Southeast Kansas Medical Society will meet in the parlors of the Oswego Hotel, Oswego, Kas., Tuesday, June 1. The following program has been prepared:

Afternoon Session.

Malignant Disease of the Stomach—J. B. Carver, Fort Scott.

Traumatic Surgery—W. E. Welch, Pittsburg.

Paper—M. T. Jarrett, Fort Scott.

Summer Diarrhea of Children—W. M. Boone, Chetopa.

Otitis Media—A. C. Graves, Cherokee.

Responsibility of Physician to Family and Public Generally—George S. Liggett, Oswego.

Night Session.

Paper—J. B. Draper, Oswego.

Paper—J. W. Porter—Litchfield.

Paper—E. B. Payne, Galena.

Paper—R. M. Markham, Scammon.

Paper—J. G. Sandridge, Mulberry.

Paper—A. L. Fulton, Kansas City, Mo.

Some Clinical Features of Movable Kidney—A. H. Cordier, Kansas City, Mo.

Notes on the Treatment of Fæcal Fistulæ.

Medical Record.

At the thirteenth annual meeting of the New York State Medical Association, which was recently held in New York City, Dr. Frederick Holme Wiggin, of New York county, presented a paper with the above title. The chief cause of the occurrence of fæcal fistula was stated to be the delay in resorting to operative measures to which patients suffering from typhenteritis, or strangulated hernia, were frequently subjected while their ailment was carefully diagnosticated. The view recently advanced by a writer on the subject under consideration, that the best treatment for this condition consisted in its prevention, was concurred in. But in the case in which this

mishap had occurred, it was pointed out that if the opening was of small size, was located near or below the ileo-cæcal valve and no obstruction to the fæcal current existed, operative measures might be deferred, as in most instances the opening would close in a short time spontaneously. On the other hand, if the bowel opening was of large size, was situated laterally or some distance above the ileo-cæcal valve, and was accompanied by the escape of a large proportion of the contents of the bowel, operative procedure for the closure of the opening should be speedily undertaken.

The histories of three cases successfully treated by surgical measures were cited. In two instances the patients were inmates of the Hartford (Connecticut) Hospital, and were operated upon by Dr. Wiggin, by reason of an invitation which was extended to him by the medical board of that institution, after several previous unsuccessful efforts to close the bowel openings had been made. The occurrence of the fistulous opening was due in the first case to failure, and in the second case to delay in resorting to surgical treatment of typhlenteritis, from which disease both patients originally suffered. In the third case the bowel opening was caused either by the pressure of the gauze used to drain the abscess cavity, or by an ulcerative process which originated from within the gut. In the first case, as the opening in the bowel was of large size, irregular in shape, and the gut was thickened and friable, the diseased portion of the bowel containing the opening, about four inches in length, was excised, and the divided ends joined by the suture methods of Maunsell. In the second and third cases, the bowel openings were situated in the head of the colon, and were in both instances closed by means of several rows of sutures, after which the omentum was drawn over the former site of the fistula, and retained in position by sutures.

In describing the technique employed the writer laid much stress upon the following points, viz.: the thorough disinfection of the parts, including the interior of the bowel, with hydrozone, closing of the intes-

tinal opening, when possible, before the breaking up of the peritoneal adhesions, and the opening of the general cavity, the removal of any existing obstruction to the the fæcal current, the disinfection of the bowel surface with a solution of hydrozone, before and after the placing of the sutures, the control of oozing from the cicatricial tissue by the same means, and the closure by a single row of silkworm gut sutures without drainage of the abdominal wound after the washing of the peritoneal cavity with saline solution, some of which is allowed to remain.

In concluding, the writer stated that ever since September, 1893, when he had proved the value of hydrogen dioxide as an effective antiseptic, which in proper solution did not unduly irritate the peritoneum, when followed by a six tenths per cent. saline solution, he had had little reason to fear the danger of causing septic peritonitis from the accidental escape of pus or fæcal matter while operating; and that when this complication had occurred, it had been invariably successfully met by the use of hydrogen dioxide in the manner described in the paper. He advised the excision of the diseased portion of the gut in those instances where it had become much thickened and friable, and expressed the belief that with a clearer understanding of the objects to be attained by operation—*i.e.*, the restoration of the integrity of the intestinal canal, as well as the closure of the opening in the bowel—future operations for the cure of fæcal fistula would more frequently result successfully than they had in the past.

The paper was discussed at some length by Dr. H. O. Marcy, of Boston, and Dr. Joseph D. Bryant, of New York county, who commended it, and in the main they indorsed the writer's views.

Alcohol and Common Sense.

Medical Age.

It is refreshing to find temperate, scientific, reasonable expressions upon the much vexed topic of alcohol, especially in the public press. Recently Mr. Pellew of the De-

partment of Chemistry, Columbia University, gave a series of lectures in the Museum of Natural History, which have been reproduced in *The Sun*.

Mr. Pellew declares that in diseased conditions when nutrition is impaired, alcohol can be given in greatly increased amounts without intoxicating effects, and is then of the very greatest value—"an ounce will give as much heat as seven or eight times the amount of beef, and that without having to undergo the process of digestion and assimilation;" in other words, "it is burned as in a lamp without wasteing the wick." The popular view that alcohol will keep up the heat of the body under exposure to great cold was pointed out to be a mistaken one. "Alcohol actually reduces the temperature of the blood under such conditions, but it is of service to restore equilibrium after the exposure is over."

Mr. Pellew pointed out "the absurd doctrines, not to say absolute falsehoods," that appertain to so-called books on physiology which are required by law as the basis of teaching in the public schools in the State of New York. He deems it "confusing to a child to learn that it is a sin to pick a pocket and to drink a glass of wine." And he queries as to the state of mind that would accrue to a German father or grandfather when his young hopeful would read from his school books that "beer more than any other liquid tends to make the drinker selfish, cruel, and brutal."

A little more common-sense enlightenment of this character regarding most of the (in) "temperate" fads might be of value in all communities. Truth should be the aim, not faddism.

Insects as an Aid in Surgery.

Medical Summary.

One of the most curious uses to which insects are put was related at a recent meeting of the Linnean Society of London. It was stated that the Greek barber-surgeons of the Levant employed a large species of ant for the purpose of holding together the

edges of an incised wound. The ant, held with a pair of forceps, opens its mandibles wide, and is brought near to the cut being treated, so that it can seize the two edges, which are held together for the purpose. As soon as the unfortunate ant has obtained a firm grip of the cut its head is severed from its body. Mr. Issigonis, of Smyrna, who described the operation to the Linnean Society, said that he had seen natives with six or seven ants' heads holding together wounds in the course of healing. A similar observation was made some years ago in Brazil, which fact is interesting from an ethnological point of view, as showing the independent existence of the same custom in countries as far apart as Brazil and Asia Minor.—*Indian Lancet*.

Referring to the above curious use of the mandibles of the ant, Dr. Brodnax says that he came across a curiosity many years ago, while studying etymology. "Having caught several specimens of the two-winged insects that were sucking the juice or sap from a wound in a hackberry tree, I noted several hornets with knots on their legs, and that occasionally the large black ants, three-quarters of an inch long, would have a fight with them, and drive them away from the sap. I caught two of the hornets with several knots on their legs, and taking them home placed them under my microscope. I found the knots to be the heads of the black ants, the jaws clasping the leg firmly, the bodies gone. I concluded the ants must have caught the hornets by the legs, and the latter in revenge bit their heads from their bodies, the jaws of the ants remaining firmly clasped around the hornets' legs."

Acute Tonsillitis and the Rheumatic Diathesis.

Revue Internationale de Rhinologie et Otologie.

G. B. Hope sees more than 2,000 cases of throat disease each year, and states that it is quite exceptional for him to find one of tonsillitis of rheumatic origin, though he has taken pains to examine suspicious cases minutely on this point. We meet acute local

manifestations of general rheumatism in sero-fibrous tissues, not in muco-fibrous, to which the tonsils belong (where we ought not to expect it) unless we grant a special predisposition in the tonsils to this affection. We do not think of making a parallel between acute rhinitis and acute tonsillitis, either pathologically or therapeutically. It is also rare to find return of tonsillitis after an attack of acute rheumatism. If the predisposition exists at all, it must be in a minimum of cases. Again, in advanced life the tonsils become less and less subject to inflammation, while gout and rheumatism are then more frequent.

Suppurative inflammation about the tonsil is of an infectious character, and is often caused by the fracture of the septum nasi for the purpose of straightening it. Such remedies as guaiac and the salicylates, useful to shorten attacks of rheumatism, fail to abort or lessen those of tonsillitis, as admitted by those who judge tonsillitis to be of rheumatic origin.

The Physician and Politics.

Gaillard's Medical Journal.

The question of medical politics we do not wish to touch upon, nor do we wish our readers to attach any wrong interpretation to the use of the words. The natural impulse of the medical man who is an earnest devotee to his profession, is most decidedly against the idea of an invasion of public places, and the appearance in public offices, for the simple reason that such a condition of affairs is generally interpreted to mean that his interest in politics is greater than his interest in medicine. Not only so, but the kind of work that a physician constantly is called upon to perform is calculated to put him entirely out of sympathy with both methods and people with whom he would come in contact in political life. And yet we must confess that the able presentation of the claims of the State and the country upon every educated individual, as presented in the address mentioned, seem to demand, even where a personal sacrifice is

involved, the active interest of the medical man in the practical politics of his town, city, State and country. We are constantly complaining because so little attention is given to the warning and to the request of such a large and intelligent part of the public as our medical fraternity. Is it not for this very reason, namely that the physicians themselves do not act as a unit, and do not take, as a rule, any interest whatever in the ordinary course of politics? This being the case, from the standpoint of the politician, they can have no weight. From the standpoint of the public, a large portion of which is organized and managed by the politician, it cannot compel a following. It does seem that the solution of the situation is comparatively simple. The physicians themselves must follow more closely, not only what affects them, but also whatever is of interest to their own municipality. In short, they must identify themselves at the outset with what appears to them to be the measures most intelligent, and best adapted to the needs of the community at large; and they must do this, not to the injury of their professional work, nor to the loss of opportunity to increase their professional information. On the other hand, the public must come to view such a changed relation in a very different light from that in which it now does. It must realize that an important factor for good has entered into political life. It must appreciate that in so doing this factor loses none of its claims to the respect and confidence of individuals in the special work to which its life is dedicated. The gist of the whole matter is simply this, that in a republic it is incumbent upon every citizen to be a politician.

Uric Acid as a Factor in Disease.

The Charlotte Medical Journal.

The part that uric acid plays in the production of morbid conditions is now fully recognized. It is of no mean import then when we find it accountable for a long train of symptoms—many of which are obscure, and many not easy to formulate. And by

reason of obscurity it can cause no surprise that errors in diagnosis are made. That many failures of relief are recorded, because the tendency has been to recognize and treat symptoms only instead of the true pathologic entity underlying the whole.

There is reason to believe that nearly all cases of periodic or paroxysmal headache, melancholia, not accounted for by other factors, and much of that undefined class of diseases denominated neurasthenia, are attributable to this cause. Then we have rheumatic affections, tonsillitis, cutaneous irritation, as in the various forms of eczema, anæmia, and menstrual disorders.

A careful scrutiny is necessary in these cases in order to distinguish the actual condition present, as there is no one symptom which will interpret or cover the whole field of inquiry.

Help may, however, be obtained if we remember that it is almost always associated with gastric disorders, malnutrition, the result of disturbed assimilation, with more or less high arterial tension, super-acidity of the urine, of abnormal color, and probably scanty in amount.

These symptoms are not due to increased production of uric acid in the blood and secretions, but to its retention and storage in the various tissues of the body. A normal daily amount may be produced, and yet if the blood is not in a condition to carry it on as effete matter, or the kidneys to eliminate it, deposits take place with the resultant cumulative interference with the normal functions of the economy.

The indications for the relief of this morbid condition, due to the excess of uric acid in the system, is to render the blood in a proper condition to dissolve out the deposit in the tissues and make the uric acid a soluble urate.

We have for this purpose a ready remedy in the so-called salines. The salicylates, and piperazine, and lysidine, have met with decided favor, have rendered good service, and are well worthy of trial. Haig states that iron cures anemia by clearing the blood of uric acid; that the administration of uric acid will quickly undo its work, and that if

in any case it fails to clear the blood of uric acid it also fails to cure anemia. That when iron fails to cure, other drugs that have more power over uric acid, or act in a slightly different way, may succeed; but that no drug of any kind will succeed if it fails to clear the blood of uric acid.

This is the principle of treatment in all cases—clear the blood and tissues of uric acid and the rest will follow. The symptoms will vanish.

Abstract of Paper on Retroversion of the Uterus.

By A. Lapthorn Smith, B.A., M.D., Montreal.

His paper was based upon ninety-four ventro-fixations and fifty-three Alexander's operations. He held that ventro-fixation was the only operation that should be entertained in cases of retroversion with adhesions; but it should not be done when the uterus was moveable, and when there was no disease of the appendages requiring abdominal section, in which cases Alexander's operation had given excellent results. There should be no death rate to either operation, neither should there ever be hernia, either ventral or inguinal, if the following directions were followed. The two operations were equally easy, although a few years ago the author was opposed to Alexander's operation on account of its difficulty. Now he could invariably find the ligaments, and generally in from half a minute to a minute and a half. He warned his hearers not to do Alexander's operation if there were any adhesions, even if they were loose enough to permit the uterus to be lifted up, because they would be put upon the stretch and would drag so much upon the ligaments as to finally pull them out of their anchorage. In laying down the technique of Alexander's operation he placed great stress upon the importance of putting aside all cutting instruments as soon as the skin, superficial and deep fascia had been cut through. Instead of laying open the inguinal canal as advocated by some writers he advised his hearers not to cut a single

fiber of the intercolumnar fascia which was the principal support of the pillars. Moreover, he said, the slightest nick of the fascia of the internal oblique would lead to a false passage and failure to find the ligament. If no cutting instruments were used, but only a Poean's forceps to draw out the ligament, there would be no difficulty in finding it, because there was nothing else in the canal but the ligament. In fact, with the eyes bandaged it could be found and drawn out simply by introducing the closed forceps and then opening them, when the round ligament will fall into them and can be drawn out. He advocated the use of fine silk-worm gut which could be thoroughly sterilized and left in permanently. Occasionally he had been obliged to remove a buried stitch. In case any fibers of the intercolumnar or internal oblique should be accidentally cut, great care should be exercised in sewing them up to avoid hernia. He had only had one relapse after ventro-fixation and one after Alexander, which were both subsequently repaired. Several of the cases of ventro-fixation had since become pregnant and had had normal confinements. Also several cases of Alexander had had children. Many of the patients had been bedridden invalids for years before and were now enjoying excellent health. Both operations, each in its proper sphere, had given the greatest possible satisfaction.

The Utility of Bowel Feeding in the Treatment of Gastric Ulcer.

Therapeutic Notes.

In the course of an elaborate and exhaustive article from the pen of D. D. Stewart, M.D., professor of Diseases of the Stomach and Intestine in the Philadelphia Polyclinic and Post-Graduate School (*American Therapist*, January,) Professor Stewart describes at length the form of enema which he most favors, which he has now used almost exclusively for several years, and which has as a basis peptonized milk gruel.

This gruel, though exceedingly nourishing in itself, is used always in connection

with some form of meat peptone, or less frequently an egg or two, so that it acts as a menstruum for more nourishing and less bulky substances. The beef preparation that I have used longest, and regard with most favor, is that sold under the name of Mosquera's Beef Jelly. This is a highly concentrated beef paste consisting almost entirely of soluble albuminoids, which have been converted into albuminoses and peptone by the proteolytic action of pineapple acid juice.

So far as I am aware it is yet unequaled as a nutrient by any other similar preparation of beef on the market, and is infinitely preferable to expressed meat juice or to crude peptone. A teaspoonful of the paste is dissolved in a small quantity of hot water and finally added to the gruel. A liquid jelly has recently been placed on the market, and is much more convenient for employment. This represents half the strength of the paste. Two teaspoonfuls of the latter may be mixed with the gruel, without the intervention of water. To this mixture of gruel and beef may be added on alternate feedings the yolk of one or two eggs. The yolk should be thoroughly beaten with the liquid jelly, or dissolved meat paste, and finally incorporated with the strained gruel. With a tolerant bowel a whole well beaten egg may be so used. If the enema containing the egg is not so well borne, it should not be repeated, but merely the yolk employed. When the whole egg is added it is better that the digestant in the peptonized gruel be not destroyed by boiling. The beef jelly or the beef jelly and egg are added only just before the introduction.

Spurious Coca Wines

New York Medical Journal.

The *British Medical Journal*, in its issue for January 23 and again in that for February 6, speaks of the dangers that attend the popular use of so-called coca wine—that is some kind of wine in which a salt of cocaine is dissolved. For the most part, the wine is of poor quality, but sweetened and highly fortified with rectified spirit. The amount of cocaine contained in many of these products is variable, too, and in prescribing them one does not really know what doses of that drug he is ordering. Moreover, the contention seems reasonable that the tonic and stimulant virtues of a real wine of coca—such, for example, as the well-known Vin Mariani—do not depend altogether upon the cocaine contained in it.